## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims:

- 1-2. (Cancelled)
- 3. (Currently amended) A motion encoder for determining rotational movement of An apparatus comprising:
  - a rotatable member comprising:;

an element providing multiple sets of electromagnetic radiation transmissions, each set comprising a plurality of areas having respectively different electromagnetic radiation transmission characteristics for onward transmission of electromagnetic radiation, the areas being arranged to provide a directionally unique sequence of transmission characteristics along a path traced on rotation of the rotatable member, and wherein the sets form multiple repetitive sequences about the element;

a source of electromagnetic radiation for directing the radiation towards the element;

a detector for sensing the onward transmission of the electromagnetic radiation from the element,

wherein the detector is located for rotation with the rotatable member.

4. (Currently amended) A motion encoder for determining rotational movement of An apparatus comprising:

a rotatable member comprising:;

an element providing multiple sets of electromagnetic radiation transmissions, each set comprising a plurality of areas having respectively different electromagnetic radiation transmission characteristics for onward transmission of electromagnetic radiation, the areas being arranged to provide a directionally unique sequence of transmission characteristics along a path traced on rotation of the rotatable member, and wherein the sets form multiple repetitive sequences about the element;

a source of electromagnetic radiation for directing the radiation towards the element;

a detector for sensing the onward transmission of the electromagnetic radiation from the element,

wherein the source is located for rotation with the rotatable member.

## 5-16. (Cancelled)

- 17. (Currently amended) A motion encoder An apparatus comprising:
  - a source of electromagnetic radiation;
  - a detector for sensing electromagnetic radiation; and
  - a rotatable member located in a path between the source and the detector, wherein the rotatable member comprises multiple sets of electromagnetic radiation transmissions, each set comprising a plurality of electromagnetic

radiation affecting surfaces having respectively different opacities to electromagnetic radiation affecting transmission of electromagnetic radiation from the source to the detector into respective different electromagnetic radiation, amounts of wherein surfaces are arranged to provide a directionally unique sequence of transmission characteristics along the path when the rotatable member is rotated, and wherein the sets form multiple repetitive sequences about the element.

## 18-19. (Cancelled)

- 20. (New) An apparatus according to claim 3, wherein the plurality of areas have respectively different electromagnetic radiation transmission characteristics for onward transmission of different amounts of electromagnetic radiation, respectively.
- 21. (New) An apparatus according to claim 3, wherein the areas comprise surfaces on the element.
- 22. (New) An apparatus according to claim 3 wherein the characteristics are reflection characteristics.
- 23. (New) An apparatus according to claim 3 wherein the areas comprise three different ones of the characteristics that are repeated in a same order on a surface of the element.
- 24. (New) An apparatus according to claim 3 wherein the rotatable member is movable in an axis perpendicular to a plane of rotation of the rotatable member.

- 25. (New) An apparatus according to claim 3 wherein the surfaces comprise different reflective surfaces.
- 26. (New) An apparatus according to claim 3 wherein the surfaces comprise partially transparent surfaces.
- 27. (New) An apparatus according to claim 3 wherein the areas comprise a substantially same size.
- 28. (New) An apparatus according to claim 4, wherein the plurality of areas have respectively different electromagnetic radiation transmission characteristics for onward transmission of different amounts of electromagnetic radiation, respectively.
- 29. (New) An apparatus according to claim 4, wherein the areas comprise surfaces on the element.
- 30. (New) An apparatus according to claim 4 wherein the characteristics are reflection characteristics.
- 31. (New) An apparatus according to claim 4 wherein the areas comprise three different ones of the characteristics that are repeated in a same order on a surface of the element.
- 32. (New) An apparatus according to claim 4, wherein the rotatable member is movable in an axis perpendicular to a plane of rotation of the rotatable member.
- 33. (New) An apparatus according to claim 4 wherein the surfaces comprise different reflective surfaces.
- 34. (New) An apparatus according to claim 4 wherein the surfaces comprise partially transparent surfaces.

- 35. (New) An apparatus according to claim 4 wherein the areas comprise a substantially same size.
- 36. (New) An apparatus according to claim 17 wherein the areas comprise three different ones of the characteristics that are repeated in a same order on a surface of the element.
- 37. (New) An apparatus according to claim 17 wherein the rotatable member is movable in an axis perpendicular to a plane of rotation of the rotatable member.
- 38. (New) An apparatus according to claim 17 wherein the areas comprise a substantially same size.
- 39. (New) A mobile communications device comprising a display and an apparatus as in claim 3, wherein the rotatable member is rotatable, in use, by a user, to provide a user input.
- 40. (New) A mobile communications device as in claim 39 wherein the rotatable member is located on the front face of the device.